

Specification Amendments

Please amend the first paragraph of page 2 to read as follows:

A vending machine for dispensing snack products and candy may have fifty or more independently operated gear motors for dispensing products. The electronics for the vending machine therefore must include a sensor for sensing when the shafts for each of the fifty or more rotatable shafts has reached its respective home position.

Although the metal parts of a vending machine are useable for a ground, existing vending machines employ at least one wire directed to each of the gear motors to provide the needed feedback to the controller for terminating power to the gear motors after they have completed rotation through 360 a cycle. It should be appreciated that most products are dispensed with the gear motor rotating rearward through a 360 degree cycle, but some products may require less than a full rotation and other products may require more than full rotation of the shaft. Where the machine employs a large number of gear motors, the wire harness complexity increases. It would be desirable, therefore, to provide an improved method of controlling the gear motors of a vending machine such that each gear motor of the machine will provide a signal to the controller when the associated rotatable shaft has returned to its home position, without requiring a wire attached to each of the individual motors.

Please amend paragraph 4 on page 5 to read as follows:

Fig. 6 is a fragmentary enlargement of Fig. 5 showing a single gear motor that is representative of all the gear motors.

Please amend paragraph 6 on page 5 to read as follows:

The motors 24 are electrically operated, and therefore have first and second electrical contacts 34, 36 respectively for applying an electric potential across the coils thereof. In Fig. 5, the first contacts for the last three motors 24d, 24e, and 24f are not marked with the indicia number 34, but the first contact of these three motors is in the same relative position as those marked 34 in the first three motors 24a, 24b, and 24c and the last three motors will be described as having first contacts 34 even though these indicia numbers are not marked. Each motor 24 also has first and second contact 38, 40 for the associated electric switch 30.

Please amend paragraph 2 on page 6 to read as follows:

Referring to Figs. 1, 4, 5 and 6, the second contact 36 of the gear motors 24a, 24b, 24c of tray 14 are connected in parallel by common connecting wire 42 to a switch 44 for connecting and disconnecting the common connector and the second contacts 36 to a first pole 43 of an electric power source 45. In similar fashion, the second contacts connectors 36 of the gear motors 24d, 24e, and 24f of tray 15 are connected in parallel

by common connector line 46 to a switch 48 for connecting and disconnecting power to the first pole 43 of the source 45 of electric power.

Please amend paragraph 3 on page 6 to read as follows:

The first contact 34 of the various electric motors 24 are also connected in columns. Specifically, the first contacts 34 of gear motors 24a and 24d 24b are connected in parallel by a common connector line 54, the first contacts 34 of gear motors 24b and 24e are connected in parallel by common connector line 56, and the first contacts 34 of gear motors 24c 34e and 24f are connected in parallel by common connector line 58.

Please amend the paragraph beginning at the bottom of page 6 and continuing to the top of page 7 to read as follows:

In accordance with current technology the gear motors 24a – 24f are powered by an electronic controller 66 having internally all functions needed to operate the motors. Accordingly, common connector line 54 is connected through a switch 60 provided within the controller 66 for connecting and disconnecting the contacts 34 of gear motors 24a and 24d to the second pole 47 (in this case the high side) of the source 45 of electric power. In similar fashion, common connector line 56 is connected through a second switch 62 within controller 66 for connecting and disconnecting the first contacts poles 34 of gear motors 24b and 24e to the second pole 47 (the high side) of a source

of electric power 45, and common connector line 58 is connected through a third switch 64 for connecting and disconnecting contacts 34 of gear motors 24c and 24f to the second pole (high side) of the source of electric power 45. In the preferred embodiment the switches 44, 48, 60, 62, 64 are actuated within the controller 66 and the power supply 45 is built into the controller 66 although it should be appreciated that all the switches switch 44, 48, 60, 62, 64 could be operated from outside the controller 66 and the power supply 45 could also be external of the controller 66.

Please amend the paragraph beginning at the bottom of page 7 and extending to the top of page 8 to read as follows:

Referring to Figs. 4, 5 and 6, in accordance with the invention the first contact pole 38 of the switch 30 associated with each gear motor 24 is electrically connected by connector 68 to the first contact 34 of the associated gear motor 24. Also, the second contacts connectors 40 of the switches 30 of all the gear motors 24a, 24b, 24c of the first row identified as tray 14 are connected in parallel by a common connector line 70 to a detector 71, which is built into the controller 66, for detecting a change in the electric potential in line 70. The controller 66 will terminate power to the energized motor 24 in row 14 when a change in electric potential is detected by the detector 71 as is further described below. In similar fashion, the second contacts poles 40 of the switches 30 of gear motors 24d, 24e, 24f of the second row, identified as tray 15, are connected in parallel through common connector line 72 to a second detector 73 in controller 66 for detecting a change in the electric potential in line 72. The controller 66 will terminate

power to an energized motor in row 15 when a change in the electric potential in line 72 is detected as is further described below.

Please amend the paragraph at the bottom of page 9 to read as follows:

It should also be appreciated that while the second contacts connectors 40 of the switches 30 have been described as being connected in parallel to detectors 71, 73 for the respective rows 14, 15 and the first connectors of the switches 30 have been described as being connected to pole 47 of the source 45 of electric power the structure could be reversed. In that case the second contacts connectors 40 of switches 30 would be connected in parallel and to a detector for detecting a change in potential and the first contacts connectors 38 of the switches 30 would be connected to pole 43 of the source 45 of electric power. The use of the terms "column" and "row" are interchangeable because the circuit is not dependent upon vertical and horizontal orientations but upon the existence of a grid of multiplex of motors.